

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105**

September 25, 2000

Harold Reid
AFBCA/DD March ROL
3430 Bundy Ave, Bldg. 3408
March AFB, CA 92518-1504

Re: Comments on Draft Sampling Analysis Plan (SAP) Addendum, Groundwater Pesticide
Investigation dated September 2000

Dear Mr. Reid,

This letter provides EPA comments on George Air Force Base's subject document. We have no comments on the Health and Safety Plan portion of the document, we focused our comments on the SAP addendum. Since George AFB (GAFB) wants to transfer the area of the dieldrin concern in May 2000, GAFB should include a soil SAP addendum that addresses the mostly likely pesticide source area locations previously discussed and documented by EPA. Conducting the soil and groundwater investigations together would also be more cost efficient. I have also reviewed Techlaw's comments and am forwarding them by the attached as part of EPA's official comments. If you have any questions, please call me at 415/744-2158.

Sincerely,

James Chang
Remedial Project Manager

Attachment

cc:

M. Plaziak/RWQCB, Lahontan Region

September 18, 2000

Mr. James Chang (SFD-8-1)
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Subject: Contract No. 68-W-98-0220 / WA No. 220-11-Q7LW George/Norton Air Force Base Work Assignment Review of Draft Sampling and Analysis Plan Addendum and Health and Safety Plan, Groundwater Pesticide Investigation, George Air Force Base, September 2000.

Dear Mr. Chang,

Enclosed please find TechLaw's review of the Draft Sampling and Analysis Plan Addendum and Health and Safety Plan, Groundwater Pesticide Investigation, George Air Force Base (the SAP). TechLaw conducted a detailed review to evaluate if the plan can achieve the objective of identifying the pesticide source and the nature and extent of dieldrin in soil and groundwater near the LF-39 landfill.

At your request, a copy of this review has also been forwarded to Mr. Joe Eidelberg of U.S. EPA's QA Office through electronic mail (via Internet) in WordPerfect® Version 8.0. A hard copy of the evaluation will also be submitted with this cover letter.

Thank you for the opportunity to provide U. S. EPA with technical services at George Air Force Base. TechLaw looks forward to working with you in the future. Should you have any questions, please call me at (415) 281-8733, ext. 23.

Sincerely,

Indira Balkissoon
Site Manager

copy to: Angela Commisso, Region 9 w/o attachment
Joe Eidelberg, U.S. EPA
P. Brown-Derocher, Central Files

**GEORGE AIR FORCE BASE
Victorville, California**

**Review of Draft Sampling and Analysis Plan Addendum
and Health and Safety Plan,
Groundwater Pesticide Investigation,
George Air Force Base
September 2000**

Submitted to:

**Mr. James Chang
EPA Work Assignment Manager
U.S. Environmental Protection Agency
Region IX (SFD-8-1)
75 Hawthorne Street
San Francisco, CA 94105**

Prepared by:

**TechLaw, Inc.
530 Howard Street, Suite 400
San Francisco, California 94105**

U.S. EPA Work Assignment No.

220-11-Q7LW

U.S. EPA Site ID No.

CA2570024453

Contract No.

68-W-98-220

U.S. EPA WAM

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(415)

September 18, 2000

**Review of Draft Sampling and Analysis Plan Addendum and Health and Safety Plan,
Groundwater Pesticide Investigation,
George Air Force Base, September 2000**

General Comments:

1. The objective of the SAP is to evaluate the nature and extent of dieldrin contamination and identify potential sources of dieldrin to groundwater. The SAP proposes five monitoring well locations and plans to identify subsequent soil sampling locations pending analytical results from the monitoring wells. However, to evaluate whether the proposed SAP would adequately meet these objectives requires more information than is currently available in the SAP. The SAP lacks sufficient rationale for selecting the proposed monitoring well locations and does not discuss site historical uses of dieldrin or information on the potential migration pathways accounting for persistence, volatility and solubility of dieldrin. Please revise the text to include additional rationale for selecting the proposed monitoring well locations. This rationale should take into account historical site use of dieldrin, information on the potential dieldrin migration pathways accounting for persistence, volatility and solubility of dieldrin. The SAP should include a discussion of the depth of groundwater in the monitoring wells where dieldrin has been detected and a discussion of the predominant direction and velocity of groundwater flow.
2. The SAP does not discuss a time line or the subsequent dieldrin soil sampling or any documents to be submitted which will describe the sampling and analysis of the subsequent soil sampling. Please revise the text to include a time line for the dieldrin soil sampling and if any documents are proposed which will describe the soil sampling and analysis.
3. As it is possible that the dieldrin being detected in groundwater samples collected from monitoring wells NZ-63 and NZ-66 was brought to the groundwater during installation of the monitoring wells, it would seem that it would make sense to evaluate the dieldrin concentrations in soils around the two monitoring wells prior to spending a great deal of money installing additional groundwater monitoring wells. It would also be prudent to collect soil samples from the borings for the new wells and analyze them for dieldrin to evaluate if dieldrin detected in the groundwater is really representative of groundwater quality or represents cross-contamination. It would probably also be prudent to collect shallow soil samples from the proposed locations of the new wells and analyze them for dieldrin prior to installing the new wells if cross-contamination of the groundwater is a possibility. Please revise the SAP to include a discussion of historical data on dieldrin in soil around the existing monitoring wells. Please revise the SAP to include analyzing soil samples collected from the borings for the new monitoring wells for dieldrin. If appropriate, please revise the SAP to include collecting shallow

soil samples from the proposed locations of the new monitoring wells prior to installing the wells.

4. No discussion of detection limits is included in the SAP. The QAPP's Appendix B, reports the Practical Quantitation Limit (PQL) for dieldrin at 0.44 ug/l. This PQL is higher than the historical detections of dieldrin in monitoring wells, NZ-63 and NZ-66. Please revise the text to include an analytical method capable of detecting dieldrin at concentrations low enough to detect dieldrin levels in NZ-63 and NZ-66. Also, include a discussion of detection limits for dieldrin as they relate to the Maximum Concentration Limits or MCLs.

Specific Comments:

1. Field Sampling Plan (FSP) - Section 2.2 - Project Purpose and Scope, page 2-1: It is unclear why soil sampling and analysis is only taking place subsequent to groundwater monitoring. Soil sampling during the installation of the five monitoring wells could provide additional data related to the nature and extent of dieldrin contamination in soils. Particularly since subsequent soil sampling proposes hand-augering to a maximum of five feet depth. The proposed scope does not include soil sampling in the interval, between five feet below ground surface (bgs) and the water table. Please revise the text to include rationale for collecting soil samples subsequent to groundwater monitoring well installation and explain how information about the nature and extent of dieldrin contamination will be gathered in the interval between five feet bgs and the water table.
2. FSP - Section 2.3 - Project Site Description, page 2-2: Does not provide adequate rationale for the selection of the proposed monitoring well locations. If both NZ-63 and NZ-66 have detected dieldrin in the past it is not clear why the majority of SAP monitoring well locations are placed upgradient of NZ-63. Please revise the text to provide more detailed rationale for the selection of monitoring well locations.
3. FSP - Figure 2-1: No explanation is provided in the text about the potential impacts of fault mapping on the NZ-103 monitoring well nor is there discussion of the decision criteria to be utilized in re-locating this monitoring well. Please revise the text to include a discussion of any impacts of faulting on the dieldrin investigation and include decision criteria to be utilized in re-locating NZ-103 monitoring well.
4. FSP - Section 2.3 - Project Site Description, page 2-2: No discussion is provided explaining why the groundwater investigation is focusing only on the Upper Aquifer. To fully characterize the nature and extent of dieldrin contamination information regarding any dieldrin impacts to the lower aquifer should be discussed. Please revise the text to include rationale for completing all of the monitoring wells in the Upper Aquifer.

5. FSP - Section 2.4 - Project Site Contamination History, page 2-2: No information related to dieldrin use at George AFB is included. This information, if available, would assist in locating monitoring wells for the dieldrin investigation. Please revise the text to include information available regarding dieldrin use at George AFB.
6. FSP - Section 3.2 - Sample Analysis Summary, page 3-4: Does not include a discussion of the decision criteria to be used to select soil sample locations. Please revise the text to include a discussion of the decision criteria to be used to select soil sample locations.
7. FSP - Figure 4-1 - Project Organization: The Montgomery Watson project manager name should be changed to reflect any new project manager appointed to the project since TechLaw understands that Donna Courington is leaving Montgomery Watson. Please revise the project organization chart to include the name of any new Montgomery Watson project manager.
8. FSP - Section 5.3 - Borehole Drilling, Lithologic Sampling, Logging and Abandonment, page 5-2: Does not include a discussion of decision criteria to be used to determine when drilling below the planned total depth of the well for purposes of confirmation of the depth and/or thickness of the aquitard, will take place. Please revise the text to include discussion of the decision criteria to be used in determining drilling below planned total depth of the well for confirmation of the depth and/or thickness of the aquitard.
9. FSP - Section 5.8 - Waste Handling, page 5-3: No time line for disposal or discussion of storage of soil cuttings produced during drilling was included in the instance that dieldrin is detected in the soil cuttings. Please revise the text to include a discussion of the time line for disposal and storage of soil cuttings while awaiting disposal in the instance that dieldrin is detected in the soils.
10. FSP - Section 8.1 Field Logbook, page 8-1: Does not include a rationale for decisions made based on field conditions. Please revise the text to include a statement that rationale for decisions made based on field conditions.
11. QAPP- Section 3.2 George Air Force Base, page 3-1: The name of Base Environmental Coordinator (BEC) is incorrect, Harold Reid is not the BEC. Harold Reid is the Remedial Project Manager and was the Acting BEC prior to the appointment of Mary Bridgewater as Regional BRAC Environmental Coordinator. Please revise to correct the name of the BEC.
12. QAPP - Section 3.3 Montgomery Watson, page 3-1: The Montgomery Watson project manager name should be changed to reflect any new project manager appointed to the project

since TechLaw understands that Donna Courington is leaving Montgomery Watson. Please revise the project organization chart to include the name of any new Montgomery Watson project manager.